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ABSTRACT

This course is designed to teach basic Russian terminology and structure which will allow the student, with the help of a good dictionary, to translate scientific material. Before taking the course, the student should control the Russian sound system and should be thoroughly familiar with the Cyrillic alphabet. This curriculum guide includes a statement of the broad goals and performance objectives of the course, a summary of course content, suggestions for the expansion of material, and sample evaluations. (PMP)

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AUTHORIZED COURSE OF INSTRUCTION FOR THE QUINMESTER PROGRAM

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

DADE COUNTY PUBLIC SCHOOLS

DIVISION OF INSTRUCTION • 1971

RUSSIAN FOR THE SCIENCE MINDED

7544.05

DIVISION OF INSTRUCTION

Dade County Public Schools

Miami, Florida

1971

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INTRODUCTION

There have been successful six-week courses in scientific Russian on the college level. It is the belief of this writer that a meaningful course in scientific and technical Russian can be offered in nine weeks on the high school level for highly motivated science-oriented students.

There appears to be a fine opportunity for application of the sound principles of individualized instruction, for this course deals with a skill suited more to individual work than team effort -- the skill of translation.

The philosophical approach to this course must be one which requires the audio-lingually oriented teacher to become flexible. Reference skills are to be taught with minimum emphasis on total communication skills.

This then is a valid experiment for the secondary schools, requiring flexibility on the part of the teacher, but offering individualized instruction in an area which continues to grow -- that of translation of Russian scientific and technical materials.

COURSE DESCRIPTION

This quin is designed to teach basic terminology and structure which will allow the student, with the help of a good dictionary, to translate scientific material. It is NOT a course for those interested in purely the spoken language so much as a course for those who anticipate the need of a reading knowledge of Russian.

Prior to this course, the learner must control the sound system of the language, and be thoroughly familiar with the printed alphabet. Successful completion of quin course #7543.01 or the equivalent will be a prerequisite, and any more advanced courses will contribute to the success of the learner.

BROAD GOALS AND PERFORMANCE OBJECTIVES

Given an article or passage in Russian from an area of science or technology familiar to the learner, a dictionary and a grammar summary or grammar text, the learner will comprehend the intent of that article or passage.

1. This course is <u>not</u> designed as an oral language course, therefore the skills of listening and speaking are dealt with minimally. Sixty per-cent accuracy in these areas will aid the learner in learning future skills, but need not be considered a prerequisite.
    a. LISTENING: The learner according to his level of maturity and achievement will identify orally presented cognates by selecting a, b, or c, as the correct orally presented English equivalent.
    b. SPEAKING: The learner according to his level of maturity and achievement will imitate orally presented cognates or words from the high-frequency list.
2. Oral reading too should be considered as an aid to future learning and a sixty per-cent minimal accuracy level will be sufficent.

Given a list of printed Russian scientific

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or technical cognates, or terms from the high frequency word list, the learner will accurately read six of each ten attempted.

3. Silent reading is the prime concern of the learner and therefore, the teacher of this quin. A minimal seventy to seventy-five per-cent accuracy level must be achieved for successful completion of the course objectives: the learner according to his level of maturity and achievement

   a. given a list of ten printed Russian scientific or technical cognates, or words from the high frequency word list, will accurately match seven printed English equivalents.

   b. given a list of ten unfamiliar printed Russian terms, in their basic forms, and a dictionary which includes those terms, will look up and identify the English meaning of seven within time alloted.

   c. given a sentence in Russian which expresses statement of a familiar fact, and time for reference, will answer English questions on that sentence in English.

   d. reading any fifty words from the high frequency word list, will, at the end of this course, identify at least thirty.

4. Structure of Russian plays an important part in

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filling gaps which occur between familiar content and cognates. For success, a minimal seventy per-cent accuracy level will be expected in the area of structural understanding. The learner, according to his level of maturity and achievement at the end of this course,

a. given ten words not in their basic forms (i.e. other than nominative case, infinitive etc.), will utilize his understanding of structure to recognize the term in its basic form from a printed list of these terms.

b. given a list of unfamiliar Russian terms, not in their basic forms, will apply his understanding of structure to convert the terms to their basic forms and identifies them correctly in English through a dictionary by properly translating seven of ten.

c. given a sentence, paragraph or article (no more than 250 words) in scientific or technical Russian, accurately will transcribe the material to English. Accuracy levels are as follows: sentence - ninety per-cent; paragraph - seventy-five per-cent; 250 word article - seventy per-cent.

5. Writing is another skill which requires minimal treatment in this course. It should be limited to the important ability to transcribe very accurately

printed Russian into printed characters or to Cyrillic script for reference usage.

The learner according to his level of maturity and achievement will accurately transcribe into either printed Russian or Cyrillic script any printed Russian material with one-hundred per-cent accuracy.

6. Attitudinally the learner should become aware of the Russian scientific method and its sometimes dogmatic rather than purely scientific approach. At the same time, Russian and Soviet scientific achievement must be recognized and appreciated if not in a cooperative world-scientific sense, at least in a "formidable opponant" sense.

Attitude toward the Russian language is generally easy to predict for science-oriented students. The logic of the language is appealing to the science-minded.

a. The student will learn to respect Russian and Soviet scientific achievement without regard for the social or political systems of the achievers. Respect will be shown in reports or discussions.

b. The learner will demonstrate a positive attitude toward the Russian language by enrolling in future courses and by independent research.

COURSE CONTENT

I. Pronunciation and Spelling Review (2 days)

Utilization of technical and scientific cognates to

A. achieve minimal spoken fluency.

B. assure proper sound letter correspondence.

C. begin familiarization of Russian endings for scientific terminlogy.

II. General Introduction of Structure (3 days)

A. The noun-adjective system

B. The verb system

C. Word order

D. Use of the dictionary

E. High frequency words

BREAKDOWN:

A. The noun-adjective system(5 days)

1. nouns

a. gender and number

b. declensions

c. uses of cases

d. absence of articles

2. adjectives

3. omission of the verb "to be"

4. introduction of noun-adjective tables

B. The verb system - part one (5 days)

1. aspects and tenses
2. personal endings
3. conjugations
4. prefixes
5. subject pronouns
6. infinitive uses

The verb system - part two (5 days)

7. past tense
   a. the conditional
   b. infinitive if-clauses
8. participles
   a. active and passive
   b. adjectival and adverbial
   c. verbal nouns
9. imperatives
10. reflexive verbs

C. Pronouns and word order (5 days)

1. pronouns
   a. dual nature
   b. personal and possessive
   c. prefixes
   d. interrogative and relative
   e. demonstrative

2. word order

   a. pronouns

   b. object-- verb - subject

   c. separation of related parts

D. Word building (5 days)

   1. deriving

   2. suffixes

   3. prefixes

   4. compounds

E. Numbers (2 days)

   1. cardinal

   2. ordinal

   3. collective

   4. punctuation

   5. time and age

F. Application (remainder of course, 10-13 days)

   1. details on nouns

   2. details on prepositions

   3. details on adjectives

   4. details on verbs

EXPANSION OF MATERIALS

George Condoyannis in his preface to the text for this quin suggests that it is designed to be used by science students and scientists alike. His simplified explanations suit it well to the bright high school student.

While oral Russian cannot be ignored in this course, it is subordinate to the skill of reading. A minimum of time should be spent correcting pronunciation unless the meaning is totally lost in the weak pronunciation of an individual. Such a weak student might profit from The Russian Alphabet Series, a Dade County Public Schools DIVISION OF INSTRUCTION publication(the series includes programmed materials and tapes).

Dr. Condoyannis' exercises are self explanatory and excellent. Students should be encouraged to purchase the text, a dictionary and some form of abbreviated grammar summary. If the text is not to be purchased by the students, it is suggested that tables and charts be developed for future reference.

In the latter part of this course there is time alloted for "details." It is felt that by translating actual passages of technical and scientific material, and thus encountering problems, explanation becomes more meaningful. To this end, the author suggests utilizing selections to be found in the reference texts listed .

An example of the type exercise intended is offered as an appendix to this outline.

The High Frequency Word List may be assigned on a daily memorization basis of approximately seven words to complete mastery of the list in the first six weeks of tne course.

Drills to familiarize the students with endings (ex. -ический) may be handled orally at first, with the students listening to the Russian and translating chorally to Engilsh:

EXAMPLE : Teacher -- биологический
Class -- "BIOLOGICAL"
Teacher -- Психологический
Class -- PSYCHOLOGICAL
etc.

A typical class session might be structured in this manner:

Vocabulary drill on preassigned words - and quiz

Exercises dealing with new material

Remaining time to be spent in independent but supervised study. Note that this is not a time for the teacher to grade a stack of papers, but should be a time for active assistance to pupils.

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SAMPLE EVALUATION

1. Listening and Speaking

a. You will hear ten Russian words. After each you will hear three English words, a,b,and c. Indicate which word is the meaning of the Russian term.

1. кратер	a.	cracker
	b.	crater
	c.	radar
2. радиус	a.	radius
	b.	radio
	c.	rod
3. сантиграм	a.	centigram
	b.	telegram
	c.	sounding
4. целлюлоза	a.	celluloid
	b.	cellulose
	c.	cellular

b. Imitate these words orally:

1. экватор
2. термометр
3. фундамент
4. ритм
5. индикатор

etc.

2. Read the following list of words

1. вакуум
2. катод
3. даже
4. радио
5. точно

etc.

3. a. Match column one to column two:

I	II
1. организм	a. one
2. вольт	b. galvanometer
3. гальванометр	c. organism
4. час	d. volt
5. один	e. hour

(list should contain ten each - Russian and English)

b. Look up meanings of these words within a time limit of three minutes. Write the first meaning in English you find in the dictionary.

1. твёрдый
2. сгущаться
3. разрежённый
4. сближение
5. масломер
6. мягкий

(maintain the ratio of two to one, or thirty seconds per word)

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c. Read this statement

Мы знаем, что кислород является самым распространённым элементом на земле.

1. About what element is this statement?
2. Where is it widely spread?

d. Identify these high frequency Russian words in English

1. а	6. голова
2. без	7. думать
3. к	8. сам
4. что	9. так
5. опять	10. сто

(student should know thirty of fifty given)

4. a. Match the oblique forms at the left to their basic forms at the right:

1. являются	a. газ
2. газов	b. газовый
3. газовых	c. явление
4. явления	d. являться

(at least ten per column)

b. Look up and identify these terms which do not appear in their basic form:

1. воздухе	3. сложных
2. земную	4. свобдном

(a time limit may be set - thirty seconds per word)

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c. Translate this passage

Массы двух тел принято
считать равными если они
уравновешивают друг друга
на рычажных весах.

5. Transcribe this passage with 100% accuracy:

Так, например, если масса
тела 2,5 кг, то вес его
можно считать равным 2,5
кГ; тело массой в 100г и весит
около 100г.

6. a,b. One method for recording attitudes is a chart:

EXAMPLE

NAME	Shows respect for Russ. scientif. acheivem.	Language oriented research	Language oriented reports	Enrolled for another Russian course	Outside use of scientif. Russian.
1. Smith, John	3/21	3/03	4/15	4/28	3/30
2. Jones, Betty			3/24	4/28	

APPENDIX

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ГАЗ[1]

Каменный уголь -- это один из основных источников энергии в современной промышленности. Но постепенно он уступает место газу. Газовая промышленность развивается быстрыми темпами. Стальные трубопроводы связывают с газовыми скважинами всё большее число городов.

Природный газ и попутный газ, который добывают при добыче нефти, служат очень важным сырьём для производства разнообразных, нужных человеку вещей. Газ, добытый из земных недр, занимает важнейшее место в современной химии. Недаром уже возник термин -- газохимия.

Газ используется в производстве азотных удобрений. Азотные удобрения из газа вдвое дешевле, чем из угля.

ОТЧЕГО СВЕТИТ ЛАМПА[2]

Известно ли вам, что любой металлический предмет может давать свет? Для этого нужно только подержать его подольше в огне. Возьмите железный прут. Нагреваясь в огне, он постепенно накалиться докрасна.

Если бы мы ещё больше накалили прут, он из тёмно-красного стал бы вишнёвым, потом светло-красным, жёлтым и, наконец, белым. Для того, чтобы железный прут довести до белого каления, нужна очень высокая температура - 1300 градусов.

И свеча, и электрическая, и газовая, и керосиковая или какая-либо другая лампа светит по той же причине, что и железный прут -- от накаливания.

В пламени свечи или лампы носятся, как пылинки в солнечном луче, раскалённые частички угля. Обычно мы их не видим. Они становятся заметными только тогда, когда свеча или лампа коптят. Копоть нам неприятна. Но если бы внутри пламени не было копоти, несгоревших частиц угля, то не было и яркого света. Пламя спирта, например, в котором нет несгоревших частиц угля, не коптит, зато и света почти не даёт. Значит, всё дело в накалённом угле. Но угол можно накаливать и без пламени, например, электрическим током. Так и поступил изобретатель первой электрической лампочки, пропустивший ток через нить накаливания. При пропускании тока нить раскалялась добела, и лампочка начинала светить.

1 Fudel, N., ed. WE READ RUSSIAN Foreign Languages Publishing House: Moscow ,(no date), p.110.

2 Ibid. p. 97.

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